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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,308	02/26/2004	Ye-Yong Kim	IK-0073	3427

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EXAMINER

JIANG, CHEN WEN

ART UNIT	PAPER NUMBER
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3744

DATE MAILED: 06/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/786,308	Applicant(s) KIM, YE-YONG	
	Examiner Chen-Wen Jiang	Art Unit 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,8-19 and 21-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4,8-18 and 25-33 is/are allowed.
- 6) ☒ Claim(s) 19 and 21-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. The amendments and arguments presented by the applicant have been duly noted. However, an update search and further review of the prior art of record has prompted the presentation of new rejections presented below. In view of such, the previous rejections in the first office action have been withdrawn.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 19,22 and 23 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Newton et al. (U.S. Patent Number 6,437,981).

In regard to claims 19 and 23, Newton et al. disclose a thermally enhanced microcircuit package for cooling electronic module. Referring to Figs.3,17 and 18, the device comprises a coolant reservoir 50, a first heat exchanger 40, a second heat exchanger 42, refrigerant liquid line 48, refrigerant vapor line 47 and reservoir feed line 52. In regard to the cellular, portable electronic et al are intended uses. The microcircuit is formed in an insulated material. The first heat exchanger, second heat exchanger, refrigerant vapor lines and refrigerant liquid lines are form as plurality channels.

In regard to claim 22, the package comprises two layers of different material, such as glass layer and silicon layer.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Newton et al. (U.S. Patent Number 6,437,981) in view of Smith (U.S. Patent Number 6,377,219).

Newton et al. discloses the invention substantially as claimed. However, Newton et al. does not disclose heat pipe incorporated with the antenna. Smith discloses heat pipe incorporated with the antenna in the same field of endeavor for the purpose of dissipation heat within the electronics. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Newton et al. with a heat pipe incorporated with the antenna in view of Smith so as to dissipate heat.

6. Claims 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Newton et al. (U.S. Patent Number 6,437,981) in view of Murakami (JP 11143585).

Newton et al. discloses the invention substantially as claimed. However, Newton et al. does not disclose heat dissipation plate couple to the casing. Murakami discloses plate coupled to the casing for information processor in the same field of endeavor for the purpose of releasing heat. Therefore, it would have been obvious to one having ordinary skill in the art at the time the

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invention was made to provide the apparatus of Newton et al. with a plate coupled to the casing in view of Murakami so as to improve heat dissipation.

Allowable Subject Matter

7. Claims 1-4,8-11,12-18 and 25-33 are allowed.

8. The following is an examiner's statement of reasons for allowance:

Claim 1 is allowed because prior art of record when considered as a whole, alone or in combination, neither anticipates nor renders obvious a heat dissipation system coupled to the communication module and the heat dissipation system comprises a heat pipe led to the communication module that extends to outside the case and an antenna separate from the heat pipe passes through an inner portion of the heat pipe.

Claims 12 and 25 are allowed because prior art of record when considered as a whole, alone or in combination, neither anticipates nor renders obvious an insulation part configured between the liquid state refrigerant flow part and each of the first and second heat exchangers.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chen-Wen Jiang whose telephone number is (571) 272-4809.

The examiner can normally be reached on Monday-Thursday from 8:00 to 6:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Chen-Wen Jiang
Primary Examiner

A handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke, positioned to the right of the name and title.